Transport Canada Transports Canada

TP 14816

TRANSPORTATION IN CANADA 2013

Overview Report

Canada

© Minister of Public Works and Government Services, Canada, 2014
Cat. No. T1-21/2013E-PDF
ISSN 1920-0846
Également disponible en français sous le titre « Les transports au Canada 2013 »
T1-21/2013F-PDF

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Minister of Transport | Ministre des Transports

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MAY

His Excellency the Right Honourable David Johnston, C.C., C.M.M., C.O.M., C.D.
Governor General and Commander-in-Chief of Canada
Rideau Hall
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Your Excellency:

It is with great pleasure that I submit Transportation in Canada, 2013, the 7th annual report on the state of transportation in Canada, as required under Section 52 of the 2007 *Canada Transportation Act*.

The report contains the most current data and information and reflects the challenges and opportunities facing Canada's transportation system, its operators and users. It explains key events, current issues and ongoing efforts to make the system as efficient, clean, safe and secure as possible. Its addendum includes transportation statistics, figures, charts and maps

In 2013, Canada's transportation system, whether measured in terms of passengers or freight, continued to grow and complete its recovery from the 2008 downturn. But on a tragic note, 2013 also witnessed the death of 47 people as a result of the train derailment in Lac-Mégantic, Quebec – an event that has spurred efforts to ensure the safety of rail freight transportation.

I hope this report will provide you, Members of Parliament, stakeholders and the general public with useful information on the state of Canada's transportation system and its impact on the country.

Sincerely,

The Honourable Lisa Raitt, P.C., M.P.
Minister of Transport

1. Introduction

Transportation in Canada is Transport Canada's flagship economic and statistical publication. The report enables the Minister of Transport to meet her obligation to report annually to Parliament on the state of transportation in Canada. This obligation is set out in section 52 of the Canada Transportation Act, which reads as follows:

Industry overview

52. (1) Each year before the end of May, the Minister shall, using the most current information available, prepare and lay before both Houses of Parliament a report providing a brief overview of the state of transportation in Canada.

Industry review

(2) Every five years, the report referred to in subsection (1) shall be expanded to a comprehensive review of the state of transportation in Canada which shall include

(a) *the financial performance of each mode of transportation and its contribution to the Canadian economy;*

(b) *the extent to which carriers and modes of transportation were provided resources, facilities and services at public expense;*

(c) *the extent to which carriers and modes of transportation received compensation, indirectly and directly, for the resources, facilities and services that were required to be provided as an imposed public duty;*

(c.1) *the long term outlook and trends in transportation in Canada; and*

(d) *any other transportation matters that the Minister considers appropriate.*

Transportation in Canada 2013 is the report's 22nd edition and the seventh edition since amendments to section 52 of the Act came into effect in 2007. It comprises an Overview Report accompanied by a Statistical Addendum. The Overview Report presents selected developments in the transportation sector in 2013 and includes the most recent key statistics.

The Statistical Addendum in the 2013 edition has undergone considerable reorganization and streamlining. It now contains 186 tables and charts which support and enrich the Overview Report. The Statistical Addendum presents the most recent data available as well as relevant historical data. It contains detailed information on a number of areas including: employment, trade and tourism, energy consumption and accident and incident statistics by mode. Addendum tables and figures also address transportation infrastructure, industry structure, activity levels and performance, adding to the comprehensiveness of the information contained in the report.

The Overview Report presents a number of selected events from the year across all modes of transportation (air, marine, rail and road) and views them through five lenses: government spending and revenues, economic marketplace and infrastructure, the environment, safety and security, as well as macroeconomic considerations that underpin the demand for passenger and goods transportation in Canada. These highlights are not an attempt to provide a complete narrative of all events that shaped transportation in Canada in 2013 but are meant to present the reader with a broad overview of the state of Canada's transportation system at the end of 2013. This year's edition includes a more in-depth look at the tragic derailment in Lac-Mégantic, Quebec in which 47 people died.

On July 6, 2013, at approximately 1:15 in the morning, an unattended MMA train carrying 72 cars of crude oil travelling from the Bakken oil fields (primarily in North Dakota) to the Irving refinery in Saint John, derailed in the town centre of Lac-Mégantic, Quebec. The accident, which took place on a sharp curve, caused explosions that killed 47 people and destroyed over 30 buildings in the town centre. It was the deadliest Canadian train accident since 1864. The Transportation Safety Board (TSB) is currently investigating the causes of this tragedy.

Nearly 6 million litres of oil burned or spilled in the accident. Oil saturated the ground around the crash site, entered the municipal sewer system and spilled into the lake and nearby Chaudière River. An estimated 100,000 litres of oil spilled into the Chaudière River.

Clean-up and decontamination costs are currently estimated at more than $200 million. The Government of Canada committed to fund up to $95 million towards the clean-up of soil and water contaminated in the derailment and an additional $25 million for immediate aid and recovery needs. In total, the Government of Canada has committed more than $120 million in support for the community of Lac-Mégantic.

In the wake of this accident and as set out in the 2013 Speech from the Throne, the Government of Canada promised to require shippers and railways to carry additional insurance so that they are held accountable for such incidents. The Government is also taking targeted action to increase the safety of the transportation of dangerous goods. Such actions include measures to test and classify crude oil, share information with municipalities and first responders about the goods being carried on trains travelling through their communities and remove, retrofit and replace tank cars.

On December 18, 2013, the section of track running through Lac-Mégantic was reopened after being closed for more than five months, re-establishing a rail link between the Eastern Townships and Maine.

In the wake of this accident, the Minister of Transport has announced the following measures to improve rail safety:

- Protective Direction on crude oil testing and classification – October 2013
- Protective Direction on dangerous goods information sharing with municipalities – November 2013
- Updated DOT-111 Standards to *Gazette I* – January 2014
- Protective Direction requiring the immediate removal of least crash-resistant tank cars from TDG service – April 2014
- Announced a three-year phase-out/refitting of tank cars built before January 2014 standard – April 2014
- Establishment of the Emergency Response Assistance Plans (ERAP) Task Force – June 2014
- Formalization of updated DOT-111 Standard to be formalized in *Gazette II* – Summer 2014

Readers interested in greater detail are invited to consult the statistical addendum, one of the most complete and in-depth sources of transportation data produced in Canada. Readers may also be interested in consulting the 2011 edition of Transportation in Canada, the five-year comprehensive version of the Annual Report providing significantly more in-depth analysis which may still be relevant in 2013.

The movement of people and goods lies at the cornerstone of our modern and interconnected world. Canadians expect to be able to travel and move their products locally, across the country or around the world efficiently, safely and securely, and in an environmentally responsible manner. Transportation methods and systems in Canada are also constantly evolving to meet new challenges, reflecting a society in a constant state of change, shaped by changing demographics, technological and communication advancements and the emergence of new markets and trading partners.

In parallel, new lenses are being applied to transportation analysis, such as connectivity, fluidity, performance and resiliency, which are enhancing the scope and value of the data collected. Transportation industries in Canada and around the world continue to innovate and find new, safer, more efficient and more environmentally friendly ways to serve increasingly connected markets.

The Overview Report and the Statistical Addendum presented here rely on a wide variety of external sources and while the utmost care has been taken to provide accurate information, Transport Canada cannot always guarantee its accuracy as different and disparate sources often bear the onus for data validation. For clarity, footnotes are used to indicate situations where data validation may be a concern.

Transportation in Canada 2013, its statistical addendum as well as previous editions of the report are available at no charge at **http://www.tc.gc.ca/eng/policy/anre-menu.htm**.

2. Transportation and the Economy

International trade is recovering from the 2008 recession. Domestic economic growth is positive despite global uncertainties. The transportation sector is experiencing growth in employment. The Canadian dollar is declining in value making our exports more competitive. Overall, Canada's economy showed signs of stability and underlying resilience in 2013.

- International travel by Canadian residents edged 0.9 percent higher in 2013. Visits to Canada by U.S. residents dropped by 1.4 percent, while tourism from other countries fell by 2.9 percent.
- Employment in the Canadian economy grew by a modest 1.3 percent in 2013. The Transportation and Warehousing sector experienced a slightly healthier 1.8 percent growth in paid employment. Self-employment in the sector grew by 3.1 percent.
- For the year, average hours worked in the Transportation and Warehousing sector dropped by 1.8 percent to 38.7 hours per week. For all sectors, the average was little changed from 2012, at 35.3 hours per week.
- Average weekly earnings (including overtime) for Transportation and Warehousing employees jumped by 6.1 percent in 2013 due mainly to the Transit sector. Earnings in the broader service sector grew by only 1.9 percent. For the goods sector, earnings growth over 2013 came in at 2.9 percent.
- There were an estimated 10,500 job vacancies in the Transportation and Warehousing sector at year-end 2013. The ratio of unemployed persons to job vacancies in the sector was approximately 3.3—almost 10 percent lower than the rate in the overall economy.
- Labour productivity in the Transportation and Warehousing sector, based on the average of quarterly data for 2013, was 1 percent for the Canadian economy as a whole. Labour productivity rose only half of the overall rate, due mainly to declines in output at Canada Post.
- The national all-items Consumer Price Index (CPI) rose by 0.9 percent in 2013. The core CPI, which excludes food, fuel and indirect taxes, rose by 1.2 percent, just within the Bank of Canada's target range of 1–3 percent. As a whole, inflation for transportation goods and services rose by 0.7 percent, but there were wide divergences within specific product categories: passenger vehicle rental fees rose by 3.4 percent, while rail and inter-city bus tickets fell by 4.5 percent, reflecting steep discounts. The closely watched price of gasoline was little changed in 2013, up 0.6 percent on average from 2012 price levels.
- Due to more pipeline capacity coming on stream and the growth in shipments of oil by rail, the gap between Brent and West Texas Intermediate oil price indices narrowed during the summer and fall of 2013, only to spike again later in the year due to refinery maintenance outages. Brent Crude traded in the range of US$100 to roughly US$116 per barrel through the year, closing little changed from 2012 year-end at US$110.70 per barrel. West Texas Intermediate fluctuated between US$92 and US$107 per barrel and closed 2013 at US$97.90 per barrel, up 10.9 percent from a year earlier.

Governments at all levels continue to invest significant public funds in infrastructure, reflecting that transportation provides the underlying foundation for a strong and growing globally connected economy.

Overall Spending

- Excluding transfers between various levels of government, the combined spending of federal/provincial/territorial governments on transportation was an estimated $21.3 billion for 2013–14, up 1.3 percent from the previous fiscal year. Federal government expenditures decreased by $5 million, while provincial spending rose by $284 million.
- Total transport-related revenues for federal plus provincial/territorial governments amounted to $18.9 billion, up 0.5 percent from the prior fiscal year. Fuel revenues were flat at $14.3 billion, while licences and registrations were also flat relative to the previous year. Air and marine revenues were higher due to increased passenger volumes and port returns.
- Federal program spending on transportation, including operating, capital and transfer costs remained stable at $5.7 billion in 2013–14, but 2.9 percent below the 2011–12 level due to Budget 2012 spending reductions. Transport Canada (TC) accounted for 29 percent of federal operating and capital spending, with the Department of Fisheries and Oceans, which includes the Canadian Coast Guard, accounting for 26 percent. Other departments, including Infrastructure Canada, made up the remainder.
- Federal subsidies, grants and contributions related to transport were down 4 percent to $4.3 billion. Infrastructure Canada was responsible for 61 percent of that funding while TC accounted for 26 percent. Gas tax funding was stable year-over-year at $198.5 million.
- Provincial and territorial governments spent $15.6 billion on transportation in 2013–14, 1.9 percent more than in 2012–13. Over 75 percent of the amount was directed towards highways and roads.
- Of the estimated $21.3 billion spent by all federal plus provincial/territorial levels of government in 2013–14, $13.4 billion was spent on roads, $3.4 billion on public transit, $1.6 billion on marine, $1.5 billion on multimodal, $1.1 billion on air and $255 million on rail.

Air Transportation

- The Canadian Air Transport Security Authority (CATSA) spent $546 million in 2013, of which $473.3 million was operating expenditures and $38.4 million was capital expenditures. CATSA received $511.7 million from the federal government.
- The Gateways and Border Crossings Fund (GBCF), a Building Canada Plan (BCP) component, invested $128.6 million in fiscal year 2013–14 to improve infrastructure at key locations, including major border crossings and gateways, improving the flow of goods between Canada and the world. Under the GBCF, $9 million was provided towards a $28 million runway extension at Halifax Stanfield International Airport and $4 million (matched by the province of New Brunswick) was contributed for a $20 million runway extension at the Greater Moncton International Airport. Both projects were completed in 2013.
- The Government of Nunavut announced on September 13, 2013 that it had signed a contract with Arctic Infrastructure Partners (AIP) to design, build, finance, operate and maintain the Iqaluit International Airport Improvement Project. Materials and equipment were delivered during the 2013 sealift season and construction will begin in the spring of 2014. This public-private partnership (PPP) project is expected to be completed by the end of 2017 and will be financed by contributions from the federal ($77.3 million) and territorial ($222.7 million) governments.
- In 2013–14, the Airports Capital Assistance Program funded 37 safety-related projects at 28 airports at an estimated cost of $20.9 million. Examples of projects include apron rehabilitation at Whitehorse ($6.5 million), runway rehabilitation at Sudbury, ON. ($2.4 million), replacing a runway sweeper at Castlegar, B.C. ($230,756) and a new snow plough truck at St. Andrews, MB. ($203,784).

- TC invested $29.3 million in the 17 airports and single water aerodrome it operates in 2012-13. For instance, $8.8 million was spent on comprehensive pavement rehabilitation at the Port Hardy airport in B.C. In 2013–14, the department expects to spend $25 million on its airport operations and $27.2 million on capital improvements.
- Charlottetown airport opened its expanded air terminal in 2013. This project was jointly funded by the federal and provincial governments as well as the airport authority, for a total cost of $3.8 million.
- The Government of the Yukon will spend $2.4 million on airport-related projects across the Territory.

Marine Transportation

Ports

- The GBCF provided $17.5 million towards the $35 million South End Terminal project at the Port of Halifax. The project was completed in 2013 and allows one of the piers (Pier C) to accommodate two post-Panamax vessels simultaneously.
- Budget 2013 set aside $450 million over five years to build, maintain and repair small craft harbours across the country. Of that amount, $63 million was allocated for 2013, including $16.6 million for Newfoundland and Labrador and over $10 million each for Quebec and Nova Scotia. In addition, the federal government will invest $1.3 million to repair and maintain six small craft harbours throughout Newfoundland and Labrador.
- Budget 2012 extended funding for two years for TC's Port Divestiture Program. The department received $21.0 million over two years to transfer ports and $6.3 million in 2012–13 to operate and maintain non-divested ports. In 2013-14, seven TC ports were divested to local entities with a total contribution of $24 million.
- TC spent $12.1 million to operate its 61 ports in 2012–13 and invested $6.2 million in capital projects. For example, $2.5 million was invested to complete berth reconstruction at the remote port of La Tabatière, QC. For 2013–14, TC estimates spending $12.8 million on its port operations and $11.3 million on capital investments.

Ferries

- In 2012–13, TC spent $32.8 million on the Ferry Services Contribution Program, which supports the private operators of three interprovincial ferry services in Eastern Canada; the amount of that contribution is expected to be approximately $27.3 million in 2013–14. In addition, TC provided a $28.4-million grant in 2013–14 to the Government of British Columbia for ferry services operated by BC Ferries.
- The Government of Newfoundland and Labrador invested $100.5M in 2013 to replace two ferries servicing Fogo, Change and Bell Islands, as well as $10 million to upgrade the wharves at Bell Island and Portugal Cove to accommodate these larger vessels.

Environment

- The federal government is investing $48 million in making marine transportation more environmentally friendly. Of that money, $30 million is earmarked for the *Shore Power Technology for Ports* (SPTP) program to deploy marine shore power technology at Canadian ports. This technology allows ships to plug into the local electrical grid to power the vessel instead of using their auxiliary diesel engines when docked, which reduces the emission of air pollutants and greenhouse gases. In 2013, the SPTP approved funding for four projects worth almost $18.5 million, including a $9.2-million contribution from TC. These projects will be implemented over the next two years.
- In addition, the Clean Transportation Initiative on Port-Related Trucking, worth $7.5 million over five years is investing $450,000 for a Container Truck Efficiency Project to equip approximately 700 container trucks serving Port Metro Vancouver with new Otto-View Global Positioning System communication units to help track and monitor truck traffic. Meanwhile, the Northern Transportation Adaptation Initiative is providing $11 million over 5 years to support projects that help Canadians better understand climate change impacts in the North, facilitate a more integrated approach to climate change adaptation and transportation planning and develop northern capacity. Approved projects include, $225,000 in 2013–14 to increase knowledge of the future stream flow and water levels of the Mackenzie River.

Safety

- In 2013, TC's Boating Safety Contribution Program (BSCP) approved funding of approximately $1.8 million to 11 organizations for single and multi-year projects over a period of three years across Canada. These projects will raise public awareness and knowledge of boating safety, issues, practices and behaviours in Canada and also support regulatory compliance. Organizations receiving funding include the Canadian Safe Boating Council (up to $909,000), the Maritime Association of Quebec (up to $287,000) and the Canadian Red Cross. In 2013 alone, $650,000 was allocated to these projects and the remaining contributions should be provided over the next two years.

Rail Transportation

- In 2013, TC approved $9.4 million in new funding under the Grade Crossing Improvement Program towards 523 projects, including 60 new grade crossings and LED light upgrades at 463 existing crossings.
- The Clean Rail Academic Grant Program provided $250,000 in federal funds to academic research programs currently developing technologies and practices which aim to reduce air emissions from the rail sector. Projects receiving funds under this program range from the development of new materials for light weighting and improved aerodynamic designs to better energy storage systems and conceptualizing a future electric railway.

Road Transportation

Infrastructure

- In 2012–13, governments collectively invested $3.9 billion in the 38,000-km-long National Highway System (NHS), an increase of about 15.5 percent from the previous year's investments.
- The federal government and the Government of the Northwest Territories will invest respectively $200 million and $99 million to build a new, year-round, 137-kilometre gravel road, which will extend the Dempster highway from Inuvik to Tuktoyatuk. Often referred to as the "Road to Resources," it will complete a national road network that stretches from coast to coast to coast. This is the largest capital project ever initiated in the Northwest Territories.
- In 2013–14, $184.8 million in federal funding was invested towards developing Asia-Pacific Gateway transportation infrastructure through the Asia-Pacific Gateway and Corridor Transportation Infrastructure Fund. The $1.26 billion South Fraser Perimeter Road (SFPR) in B.C. ($365 million federal contribution), the $300 million Circle Drive Southwest project in Saskatchewan ($95.9 million federal contribution) and the $212.4 million CentrePort Canada Way project in Manitoba ($101.6 million federal contribution) were all completed in 2013. The SFPR was delivered through both traditional design-bid-build contracts and a PPP between the province and the Fraser Transportation Group.
- The Government of Canada provided $100 million under the Building Canada Fund towards the construction of the Calgary Southeast Stoney Trail, which opened in November 2013. The project was delivered through a 33-year, $769-million PPP agreement between Alberta and Chinook Roads Partnership to design, build, operate, maintain (for 30 years) and partially finance the project. The project involved the construction of approximately 25 kilometres of six-lane roadway, bridges, interchanges and rail and road flyover crossings.
- Numerous major road and bridge projects funded under the Canada Strategic Infrastructure Fund (CSIF) were completed in 2013 including: the $83.1 million Route 1 One Mile House Interchange project in New Brunswick ($31.7 million in federal funding), the $63 million Route 7 Wellsford Bypass project in New Brunswick ($26.1 million in federal funding) and the $25.5 million Conception Bay South Bypass (Phase 3) project in Newfoundland and Labrador ($6.51 million in federal funding).
- A number of GBCF-funded projects were completed in 2013, including: the $20 million Route 1 Realignment project between Churchill and New Haven in Prince Edward Island ($8 million in federal funding) and the $40 million Saint John Harbour Bridge Rehabilitation project in New Brunswick ($17.5 million in federal funding).

Environment

- The federal government is contributing $38 million over five years to the ecoTECHNOLOGY for Vehicles Program. Funds will be used to conduct proactive and in-depth safety, environmental and performance testing on a range of new and emerging advanced vehicle technologies for passenger cars and heavy-duty trucks. This will support vehicle regulation in Canada and cooperation with U.S. regulators in the integrated North American vehicle market.
- In addition, TC is contributing up to $944,000 for two projects under the Northern Transportation Adaptation Initiative. These projects will support the collection of data and an evaluation of the effects of climate change and permafrost degradation on transportation in Yukon and help Yukon Highways and Public Works better understand the hydrological response to climate change along the Dempster Highway. Results from these projects could make the infrastructure more resilient to floods, washouts and permafrost degradation.

Public Transit

- The Government of Canada committed $697 million towards the construction of the twin tunnels for the Toronto York-Spadina Subway Extension project, a $2.6 billion extending Toronto's subway into York Region. In 2013, the final segment of tunneling was completed when a tunnel boring machine broke through the headwall at the Vaughan Metropolitan Centre Station site, finishing the tenth and final tunnel drive for the project. The Province of Ontario provided $870 million towards the project through the Move Ontario Trust and the City of Toronto and the Regional Municipality of York are contributing $526 million and $352 million respectively towards the project.
- The federal and Ontario governments each provided $250 million towards the GO Transit Improvement Program that aims to enhance service and reliability; projects include, including new parking facilities such as the Erindale Parking Structure (1,500 spaces) and the Ajax Parking Structure (1,300 spaces). They were both completed in 2013. Several projects remain ongoing, including the East Gwillimbury bus servicing and storage facility, the Pickering Parking Structure, the Clarkson Parking Structure and the installation of Platform Snowmelt Systems at various GO Stations.
- The CSIF committed $83 million to the Mississauga Transitway project to build a 19-kilometre East–West Bus Rapid Transit project, which is scheduled to be fully open in 2016. The City of Mississauga provided $118 million and Metrolinx provided $48 million towards this $259 million project. In 2013, construction began on the west segment of the Mississauga Transitway corridor at the Erin Mills Station.

Multimodal Transportation and Contaminated Sites

- In 2013, TC invested approximately $5.2 million in more than 60 research and development (R&D) projects across all modes of transportation.
- In 2013–14, TC conducted 29 Federal Contaminated Site Action Plan (FCSAP) remediation projects, 12 environmental site assessments and 19 remediation projects at airports and ports for a total expenditure of $17.9 million.

Revenues from Transportation

Overall Revenues

- The federal, provincial and territorial governments received $19 billion in revenues from transportation in 2013–14, up 1.2 percent from the previous year. Non gas-tax revenues for the federal government were up 1.9 percent to $1.1 billion, with over half that amount coming from the Air Traveller Security Charge.

Air Transportation

- Total rent paid to the federal government by National Airport System (NAS) airport authorities was $279.6 million in 2012, a 3.9-percent increase from 2011. An additional $7.3 million in deferred rent repayments was also collected from NAS airport authorities in 2012.
- In 2012–13, revenues from TC's airports and waterdrome were $14 million; operating expenditures came to $23 million.

Marine Transportation

- In 2013–14, revenues from TC's ports were approximately $8.6 million, down 7.5 percent compared to $9.3 million for 2012–13.

Road Transportation

- Fuel tax revenues to the federal, provincial and territorial governments reached $14.3 billion in 2013–14, up 0.6 percent compared to the previous year. The federal share of total gas tax revenues was 36.9 percent.

4. Air Transportation

The year 2013 was a transformative one in the airline industry in Canada with the launch of Air Canada's rouge and Westjet's Encore and important aircraft orders from Air Canada, WestJet and Porter. Meanwhile traffic increased 2.9 percent mainly due to the transborder sector while Canada's safety record continued to improve with the lowest number of air accident fatalities since 2008.

Economic Marketplace and Infrastructure

- During the 38th International Civil Aviation Organization (ICAO) Assembly, attended by 191 nations, Canada was re-elected to the organization's governing body, the ICAO Council. In addition, ICAO signed a renewed agreement with Canada covering the use of the Headquarters building in downtown Montreal for a 20-year period through to 2036. ICAO is the only United Nations agency headquartered in Canada and its headquarters are in close proximity to those of other notable aviation organizations, including the International Air Transport Association, Airports Council International (ACI) and the International Federation of Air Line Pilots' Associations.

Traffic

- Passenger traffic at Canadian airports increased 2.9 percent in 2013, to reach 85.2 million enplaned and deplaned passengers. Domestic, Canada–U.S. and other international traffic increased year-over-year by 2.8 percent, 4.4 percent and 1.6 percent respectively. Air Canada and WestJet carried 35.8 million and 18.5 million passengers respectively (including their affiliates and subsidiaries).
- Freight traffic at Canadian airports was 832,000 tonnes in 2013, up 0.1 percent from 2012. Domestic traffic decreased year-over-year by 6.1 percent, while Canada–U.S. and other international traffic increased year-over-year by 6.3 percent and 7.7 percent respectively. The value of Canada's international air cargo trade increased by 2.7 percent from 2012 levels to reach $111.3 billion.
- The number of take-offs and landings reported at Canadian airports totalled 6.1 million in 2013, a 0.2-percent decrease from the 6.2 million movements reported in 2012. Itinerant movements were flat in 2013 compared to 2012, while local movements decreased 0.8 percent.

Airlines

- Air Canada's earnings in 2013 were $10 million on revenues of $12.4 billion, while WestJet's earnings were $268.7 million on revenues of $3.7 billion. Air Canada's revenues were up 2.2 percent compared to 2012 while WestJet's were up 7.0 percent. Transat A.T. Inc., Canada's largest tour operator, reported an annual profit for the first time since 2010 with net earnings of $58 million —up from a loss of $16.7 million in 2012— as a result of a significant restructuring of all facets of the company, including that of its in-house air carrier, Air Transat. Finally, Chorus Aviation Inc. reported earnings of $61.9 million, down 38.3 percent over 2012 on revenues of $1.7 billion, a 2.4-percent decline in one year.
- In 2013, Air Canada launched the low-cost subsidiary, rouge, catering to the Caribbean and European leisure markets and using two Boeing B-767s and eight Airbus A-319s, already in its fleet. WestJet launched its regional carrier, Encore, with an initial fleet of six newly delivered Bombardier Q400s (and 14 more on order), expanding the airline's network into smaller markets in Alberta, British Columbia and Manitoba.
- Air Canada is increasingly diversifying its use of regional feeder airlines. Following the 2012 transfer of all of its 15 Embraer E175s to Sky Regional Airlines in September 2013, Air Canada undertook a process to contract for regional service and, in December 2013, awarded an expanded contract to Air Georgian to operate transborder flights under the Air Canada Express banner as early as mid-2014.
- Air Canada and WestJet each announced fleet renewal plans, including commitments and options to purchase up to 109 and 65 Boeing B-737 MAX aircraft respectively. Deliveries of the new, more fuel-efficient aircraft are scheduled to begin in 2017 for both airlines. Air Transat is adding 11 leased Boeing B-737-800s to its fleet, six of which will only operate during the peak winter season. These will replace the five to eight B-737s that Canjet Airlines was operating on Air Transat's behalf.

- Porter Airlines announced a $2.3-billion purchase of six more Q400s and 12 new Bombardier CSeries aircraft with the goal of expanding its network to destinations across North America and the Caribbean. The CSeries purchase is conditional on obtaining approval to operate jet aircraft at Porter's hub, Billy Bishop Toronto City Centre Airport.
- Air Canada and Cargojet Inc. announced a letter of intent to explore strategic opportunities for cooperation in both cargo and airline operations within Canada and in international markets.
- In August 2013, Air Canada opened a new, 7,000-m^2 operations centre in Brampton at a cost of $60 million. The building houses 400 employees working in the operations, passenger journey, cargo, maintenance and crew scheduling sectors.
- Canada's ratification of the *Convention on International Interests in Mobile Equipment* and its associated Protocol on Matters Specific to Aircraft Equipment (*Cape Town Convention and Protocol*) took effect on April 1, 2013. The Convention and Protocol provide an internationally endorsed regime for asset-based financing, which allows for cost-effective acquisition of aircraft.
- The Minister of Transport unveiled a new policy for wet-leasing in the air industry. Wet-leasing is the practice of renting aircraft, with crew, maintenance and insurance included, from another aircraft operator. This policy imposes a cap of 20 percent of a Canadian carrier's fleet at the time of application that can be wet-leased from a foreign company for periods of more than 30 days. The policy maintains the safety of Canada's aviation system, promotes a stable and predictable operating and employment environment and ensures reciprocity of opportunities with other jurisdictions.
- The Canadian Transportation Agency (CTA) published the *Air Carrier Compliance Report*. It indicated that domestic air carriers' showed a very high degree of compliance with the *Removing Communication Barriers for Travellers with Disabilities* code of practice. These included practices related to services provided at airports, on-board services, services for persons using mobility aids and onboard safety videos.
- The CTA recorded 301 complaints against Canadian air carriers and 218 against foreign carriers in 2012-13, with the most common complaint relating to quality of service. The total number of complaints registered a sharp 44.1-percent increase compared to 2011–12.

Air Services

- In 2013, the federal government announced the conclusion of 26 new or expanded air transport agreements negotiated under the Blue Sky policy. The expansion of agreements in 2013 sets the stage for new and expanded services in 2014 between Canada and Japan, Panama and Turkey, among others. Since this policy came into effect in 2006, Canada has concluded new or expanded air transport agreements covering over 80 countries.
- Canadian carriers launched new domestic routes, including Calgary–Red Deer on Air Canada, Calgary–Brandon/Fort St. John/Nanaimo, Vancouver–Fort St. John/Kamloops/Terrace/Victoria and Toronto–Fort McMurray on WestJet, on Central Mountain Air, and Vancouver–Prince Rupert/Terrace and Prince George–Calgary/Smithers. Finally, Helijet began services between Vancouver and both Tofino and Qualicum.
- New international routes by Canadian carriers in 2013 include: Air Canada's flights between Toronto and Seoul, Istanbul and Vail; rouge's flights from Toronto to Venice and Edinburgh; Westjet's first trans-Atlantic route, between St. John's and Dublin; Air Transat's new services to Prague from both Montreal and Toronto and Porter's expanded service to Boston and Chicago. Meanwhile, Air Canada suspended its year-round Edmonton–London flights, now only operated in the summer.
- Several foreign carriers also launched new routes in the Canadian market in 2013; for example, United Airlines began serving Newark–Edmonton, Washington–Vancouver and Denver–Fort McMurray, Lufthansa launched a Vancouver–Munich service, Saudi Arabian Airlines launched a Jeddah–Toronto service, Bluebird Cargo launched a weekly narrow-body freighter service between Moncton, Keflavik and Liege, while China Eastern Airlines' doubled of its daily service between Vancouver and Shanghai.

Airports

- In 2012, National Airport System (NAS) airports handled 107.6 million enplaned and deplaned passangers, up 4.3 percent from 2011. Revenues from these airport authorities were $3.0 billion, an increase of 3.9 percent over 2011. Airport authorities in Toronto, Montreal, Vancouver and Calgary accounted for

77.6 percent of these revenues; 37.5 percent of revenues earned were from aeronautical sources, 31.9 percent from non-aeronautical sources and 30.6 percent were derived from passenger facility fees. Revenues from Airport Improvement Fees yielded $911.7 million in 2012, an increase of $53.9 million or 6.3 percent over 2011.

- Airport operating expenses remained virtually unchanged from 2011 at $1.1 billion, while interest charges increased by 3.1 percent to $680.7 million. The aggregate net income for all airport authorities increased 1.4 percent to $197.0 million in 2012. Total capital expenditures by NAS airport authorities in 2012 amounted to $1.2 billion, up 25.6 percent from 2011.
- Hamilton's John C. Munro International Airport will build a new $12-milion 5,570-$m^2$ air cargo handling facility with direct airside access to a new 10,880-m^2 dedicated air cargo apron. This project is funded equally by the federal government, the Province of Ontario and Tradeport, the airport operator. Once it opens in 2015, the facility will eliminate the need for trucks to drive directly to the apron to load or offload their freight to an aircraft.
- On November 30, 2013, Edmonton's Blatchford City Centre Airport ceased operations after 86 years, making way for a new neighbourghood on the 217-hectare site that housed Canada's first licensed airfield. Two of the airport's three runways had been closed since 2010. Meanwhile, Edmonton's Villeneuve Airport will extend one of its two 1,066-metre runways to 1,525 metres to accommodate medevac and small passenger jets.
- The CTA released a new accessibility Code of Practice and accompanying Resource Tool for Non-NAS Air Terminals. The Code provides technical specifications for the physical aspects of non-NAS airports and also covers disability-related services, personnel training and communication while the *Resource Tool* provides examples of best practices to assist non-NAS air terminal operators in implementing the accessibility provisions of the Code.

Environment

- Canada actively participated in discussions to address greenhouse gas (GHG) emissions from international civil aviation in the lead-up to the 38th Assembly of ICAO, which took place from September 24 to October 4, 2013 in Montreal. Canada supported the resolution on climate change adopted at the Assembly. The resolution includes a goal of carbon neutral growth starting in 2020 to be achieved through a broad basket range of measures.
- In 2011—the latest year for which data are available—domestic aviation emitted 6.1 megatonnes (Mt) of carbon dioxide equivalent (CO_2e), accounting for 3.6 percent of transportation-related GHG emissions and 0.9 percent of total Canadian GHG emissions. Between 1990 and 2011, domestic aviation's GHG emissions decreased by 14.7 percent, from 7.2 Mt to 6.1 Mt, despite increased traffic. This reduction can be attributed to continued improvements in aircraft design and operations, as well as the introduction of new aircraft. However, without further mitigation action, Environment Canada expects aviation GHG emissions to increase by 16.7 percent (or 1.7 percent per year) to reach 7.1 Mt in 2020.
- In 2011, aviation accounted for 7.5 percent of nitrogen oxide (NO_x) emissions, 5.9 percent of all transportation-related emissions of sulfur oxides (SO_x) and less than 3.0 percent of transportation-related emissions of volatile organic compounds (VOC), fine particulate matter ($PM_{2.5}$) and carbon monoxide (CO). While they only represent a small portion of transportation air pollutant emissions, aviation-related NO_x, SO_x and VOC emissions grew by 55.8 percent, 58.4 percent and 46.9 percent respectively between 1990 and 2011, while emissions of CO and $PM_{2.5}$ decreased by 6.0 percent and 4.9 percent respectively.
- In 2013, TC and Canadian aviation stakeholders continued implementing *Canada's Action Plan to Reduce Greenhouse Gas Emissions from Aviation*. The Action Plan set an ambitious target to improve fuel efficiency annually by 2.0 percent until 2020, from a 2005 baseline.
- In the Action Plan, the industry committed to calls for annual reporting on emissions with the first report (for 2012) released in December 2013. This report indicates that Canadian air carriers made good progress towards the Action Plan target, achieving an annual average fuel efficiency improvement of 1.2 percent from 2005 levels.

Safety

- There were 10 fewer aviation accidents in 2013 than the average of the previous decade. Thus, 233 aviation accidents took place that year, or 5.5 accidents per 100,000 hours flown. These accidents caused 50 fatalities, the lowest reported number since 2008.

- During the ICAO Assembly, TC signed a Working Arrangement with the European Aviation Safety Agency on their Safety Assessment of Foreign Aircraft Program. Both parties also agreed to promote rulemaking cooperation. ICAO member states endorsed the Global Aviation Safety Plan, the Global Air Navigation Plan and the new annex to the ICAO convention—Annex 19—on safety management.
- Bombardier's CS100 (CSeries) successfully completed its maiden flight on September 16, 2013, following delivery by TC of a flight test permit 18 days earlier. The aircraft, to be assembled at Montreal's Mirabel Airport, is the largest and most advanced commercial jetliner ever assembled in Canada. The aircraft is truly international in nature, incorporating parts built in the U.S., Europe and Asia, with assembly being the last step in this global value chain. As of early 2014, the CSeries had over 200 firm orders and 225 additional options to purchase. Its three test aircraft are undergoing the most complex type certification ever undertaken by TC. The CSeries is expected to enter commercial service at the earliest during the second half of 2015, but only after the rigorous testing and certification process has been completed and the aircraft has been deemed safe.
- On February 20, 2013, TC granted Pratt & Whitney Canada a type certificate for the PW1500 engine, after a three-year certification program and nearly 4,000 hours of testing. This engine powers the Bombardier's CSeries aircraft.
- After an intensive seven-month parallel certification process, TC issued an air operator certificate in June 2013 to WestJet Encore and Air Canada rouge.
- On May 27, 2013, NAV Canada opened a new control tower at Calgary International Airport. At 91.4 metres high, it is the tallest free-standing air traffic control tower in Canada and is designed to provide optimal sight-lines on what will be Canada's longest runway, 17L/35R, due to open in 2014.

Security

- As part of the Beyond the Border Action Plan, signed by Prime Minister Harper and President Obama in 2012, the Integrated Cargo Security Strategy (ICSS) was developed to address risks associated with shipments arriving from outside of Canada. This strategy will facilitate the movement of cargo through the Canada-U.S. border and promote a more competitive supply chain.
- There are a number of pilot projects and activities that will inform the ICSS. In one such pilot project, TC and the Canada Border Services Agency (CBSA) are collaborating on a Pre-load Air Cargo Targeting (PACT) pilot. The PACT initiative requires volunteer air carriers and freight forwarders to provide air cargo data on aircraft destined for Canada prior to loading in a foreign country. Once data are received, CBSA and TC work together to mitigate risk at the earliest point, while facilitating the flow of legitimate cargo.
- The Canadian Air Transport Security Authority (CATSA) lowered the cost of security screenings without impacting the level of security by improving the effectiveness and efficiency of daily operations. At peak times, CATSA is now able to screen about 120 passengers per lane per hour at Canada's eight major airports, as compared to 90 passengers per lane per hour in 2010.
- CATSA is deploying its new checked baggage screening system at airports across Canada, allowing shorter connections in U.S. airports by ensuring that passengers transiting through the U.S. are not required to have their hold baggage rescreened. This new system is in support of the Canada-U.S. *Beyond the Border Declaration for a Shared Vision for Perimeter Security and Economic Competitiveness*.
- Since January 2013, airline passengers who hold a valid NEXUS card can now benefit from a dedicated screening lane at 14 major airports across Canada. These lanes will help expedite the screening process for low-risk passengers while maintaining a high degree of security.
- Pre-boarding security screening by CATSA returned to Brandon in September 2013, when Encore began flying from there to Calgary. Screening is mandatory for all flights between designated airports using the air terminal building and until the launch of the Encore service, all flights from Brandon—which is designated—were to non-designated airports.
- A key commitment in the Government of Canada's Air India Inquiry Action Plan is the development of a National Civil Aviation Security Program (NCASP). Published in April 2013, the NCASP describes the legislation, policies, programs and regulations that govern aviation security in Canada. It takes a holistic approach to aviation security and aims to strike the right balance between security, efficiency and fiscal responsibility, while carefully applying risk management principles.

5. Marine Transportation

Canada enjoyed solid growth in marine transportation, including increased container and cruise ship traffic, a successful crossing of the Northwest Passage and a North American record for bulk cargo loads. Meanwhile, new regulations will ensure marine transportation continues to be safe and environmentally responsible while a new container inspection facility in Vancouver will improve supply chain security and efficiency.

Economic Marketplace and Infrastructure

Traffic

- The 18 Canada Port Authorities (CPAs) across the country handled approximately 294 million tonnes of goods in 2012, a 3-percent increase over 2011.
- Total marine freight traffic in Canada reached about 475 million tonnes in 2012, the latest year for which data were available, up 1.9 percent compared to the previous year. Marine transportation services in 2013 carried $205 billion worth of international trade, an increase of 0.3 percent over 2012.
- BC Ferries carried 16.1 million passengers in 2013, down 0.5 percent compared to 2012. On its busiest route, between Tsawwassen (Vancouver) and Swartz Bay (Victoria), BC Ferries carried 4.6 million passengers, the same as in 2012.
- Marine Atlantic Inc. carried 351,643 passengers, 123,609 passenger vehicles and 103,160 commercial vehicles in 1,818 crossings it operated between Newfoundland and North Sydney, Nova Scotia in 2012-13. It also generated a record $107.3 million in revenues, up 6.8 percent from 2011-12.
- In 2013, the St. Lawrence Seaway handled 37 million tonnes of cargo, a 5-percent decrease compared to 2012. The Seaway generated $72 million in revenues against operating expenses of $133.6 million.
- The number of cruise passengers visiting Canada's busiest cruise port—Port Metro Vancouver—increased by 21.9 percent in 2013 to reach 812,398. The number of vessels carrying these passengers increased by a similar amount (23.0 percent), with 235 ships calling at the port in 2013. The second busiest cruise ship port in the country, Quebec City, welcomed 164,000 visitors on 103 cruise ships.
- In September 2013, the 225m-long Nordic Orion, carried 15,000 tons of coal from Vancouver to Pori, Finland using the Northwest Passage. The 75,603-deadweight-tonne Danish ship was the first dry bulk ship to successfully complete the voyage and saved $200,000 as compared to going through the Panama Canal. Twenty other vessels voyaged through the Northwest Passage in 2013, mostly yachts and cruise ships.

Ports and Infrastructure

- Operating revenues for all CPAs in 2012 increased to $514 million from $489 million in 2011, while operating expenses increased to $261 million from $252 million. The average ratio of operating revenues to operating expenditures was 197 percent. Port Metro Vancouver accounted for nearly 37 percent of total CPA revenue while the Port of Montreal accounted for an additional 17 percent. Six CPAs (Vancouver, Montreal, Toronto, Prince Rupert, Quebec City and Halifax) collectively accounted for 82 percent of total CPA revenue and 79 percent of total CPA expenditures.
- Aggregate net income for the CPAs increased 20 percent in 2012 compared to 2011, totalling $173 million. Out of the 18 CPAs, 16 recorded a positive net income in 2012. CPAs spent more than $258 million on acquiring capital assets in 2012 while the overall return on assets was 6 percent, a slight increase over 2011.
- Canada's largest container port, Port Metro Vancouver, handled 2.8 million TEUs (twenty-foot equivalent units) in 2013, a 4-percent increase over 2012. Also Canada's largest bulk port, Vancouver handled 92.7 million bulk tonnes in 2013, an 11-percent increase over 2012 due to large increases in coal, chemicals and fertilizers. This boosted total tonnage by 9 percent in 2013 compared to 2012.
- Further north on the Pacific coast, the Port of Prince Rupert handled about 536,000 TEUs in 2013, a 5-percent drop compared to 2012 after posting 38-percent growth in traffic that year.
- The Port of Churchill handled 600,000 tons of mainly grain, canola and goods supporting the sea-lift resupply of Western Nunavut communities.

- Traffic at the Port of Montreal decreased slightly in 2013. The Port handled 28.2 million tonnes and 1.3 million TEUs, numbers similar to 2012. In 2013, the Port of Montreal announced that new measures will make it possible for all post-Panamax vessels, including 6,000-TEU container ships, to reach Montreal.
- The Port of Quebec City handled 27 million tonnes in 2013, down from the previous year's 32.5 Mt. Meanwhile, work began on a new $20-million wood pellet terminal that should be operational by the summer of 2014 and have a capacity of 400,000 tonnes per year.
- The Port of Sept-Îles welcomed its first Chinamax-type vessel, among the largest and longest bulk carriers currently in service and the first vessel of its size to be loaded at any North American port. The ship loaded 302,264 tonnes of iron ore sources from Cliffs Natural Resources' Bloom Lake Mine, the most bulk cargo ever loaded onto a ship in North America. The Port of Sept-Îles handled 28 million tonnes of cargo and invested $130 million in 2013 along with local mining companies to build a new $220 million berth at Pointe-Noire.
- The Port of Saint John saw a 50-percent increase in container traffic in 2013, boosted by an agreement with Tropical Container Line to carry cargo for Hapag-Lloyd. Overall in 2013, the Port of Saint John reported a 2.4-percent increase in cargo tonnage.
- In 2013, the Port of Halifax welcomed container vessels with a capacity of up to 7,500 TEUs, the largest to ever visit the port. It handled 442,000 TEUs, up 6 percent from the previous year. Halifax saw overall cargo decrease by 9 percent in 2013 compared to 2012 due to a sharp decrease in bulk cargo. Irving Shipbuilding is investing $300 million in the Halifax Shipyard Modernization Program. It will enable that facility to prepare for the construction of the Arctic Offshore Patrol Ships in 2015 and the new Surface Combatant fleet thereafter, as part of Canada's National Ship Procurement Strategy. At the end of 2013, $175 million of that sum had already been invested, creating over 1,600 jobs.
- The small craft harbour at Pangnirtung opened on September 18, 2013 and is the first small craft harbour in Nunavut. It includes a fixed wharf, breakwater, sea-lift ramp, dredge canal and marshalling area. It represents a $40.5-million investment by the federal government. These investments enable larger ships to dock and accelerate turn-around times.

Ferries

- BC Ferries refitted 13 of its 35 ships in 2013–14, requiring the ships to be dry-docked. BC Ferries also undertook heavy maintenance on 11 other ships. On average, BC Ferries' fleet is over 32 years old, hence the need for this important maintenance program.
- Marine Atlantic Inc., a federal Crown Corporation, awarded a $20-million contract for the construction of a new ferry terminal in North Sydney, Nova Scotia. This modern new building will offer amenities such as a commercial driver lounge area and will be closer to the downtown core.

Environment

- In 2011, the latest year for which data are available, the domestic marine sector emitted 6.1 Mt of CO_2e, accounting for 3.6 percent of transportation related GHG emissions and 0.9 percent of total Canadian GHG emissions. Between 1990 and 2011, domestic marine GHG emissions increased by 21.4 percent, from 5.1 Mt to 6.1 Mt, representing an average annual increase of 0.9 percent. The increased use of larger, more efficient vessels during this period was offset by an increase in total tonne-kilometres (tkm). Environment Canada expects marine GHG emissions to increase from 6.1 Mt to 7.9 Mt between 2011 and 2020 (a total increase of 29.3 percent, or an average of 2.9 percent per year), due mainly to increased activity.
- In 2011, marine transportation accounted for the majority of transportation-related SO_x emissions (91.0 percent), but this represented only a small portion (6.8 percent) of Canada's total SO_x emissions. The marine sector also accounted for 17.5 percent and 11.8 percent of transportation-related $PM_{2.5}$ and NO_x emissions respectively, but contributed less than 1 percent of transportation-related VOC and CO emissions in Canada. Between 1990 and 2011, emissions of all marine-related air pollutants decreased, the significant decreases being in emissions of SO_x, VOC and $PM_{2.5}$ emissions, which fell by 24.8 percent, 10.7 percent and 10.3 percent respectively.
- In March 2013, the Government of Canada announced it would introduce the *Safeguarding Canada's Seas and Skies Act* along with other measures toward the creation of a world-class Tanker Safety System. These measures include increasing tanker inspections, establishing a system of aids to navigation, expanding the

National Aerial Surveillance Program and conducting scientific research on non-conventional petroleum products.

- On March 18, 2013, the Government of Canada announced the formation of the Tanker Safety Expert Panel (TSEP) to conduct a pan-Canadian review and assessment of Canada's regulated oil spill preparedness and response regime as it pertains to oil handling facilities and ship-source oil spills. The review is being conducted in two phases. The first phase focused on the oil spill regime currently in place south of 60° north latitude and is now completed. The second phase will focus on ship-source oil spill preparedness and response requirements in the Arctic, as well as requirements for a hazardous and noxious substances system nationally. A second report will be prepared for the Minister of Transport by the end of 2014.
- TSEP's first report entitled "*A Review of Canada's Ship-source Oil Spill Preparedness and Response Regime – Setting the Course for the Future*" was released on December 3, 2013. The Panel's report contains 45 recommendations including: the development and implementation of a regional, risk-based model for spill preparedness and response in collaboration with local stakeholders; strengthening federal leadership and coordination, including scientific leadership; and imposing the polluter pay principle by enhancing the Ship-Source Oil Polluter Fund (SOPF), Canada's domestic liability and compensation fund. The Government of Canada responded to the report and other advice and analysis with the announcement several months later of further measures to ensure that Canada has a world-class tanker safety system.
- Amendments to the International Maritime Organization's (IMO) Convention for the Prevention of Pollution from Ships (MARPOL) came into force on January 1, 2013. They were agreed to in 2011 and apply to all ships of 400 gross tonnes and above. These amendments will trigger:
  - Canada's adoption of the North American Emission Control Area
  - New standards to reduce the emission of sulphur oxide and nitrogen oxide pollutants
  - New energy efficiency requirements for international shipping vessels
  - A new air emission regime to support the modernization of fleets
  - Certification of new engines under recognized environmental standards
  - Higher standards for greywater used on a ship
  - Standards regarding the transfer of oil between tankers that are harmonized with the IMO's
- On May 8, 2013, amendments to the *Vessel Pollution and Dangerous Chemicals Regulations* were finalized under the *Canada Shipping Act, 2001*. These regulations implement domestic approach to the MARPOL amendments identified above.
- In 2013, Transport Canada (TC) completed a comprehensive national Port Emissions Inventory for the 18 CPAs. In addition, an Arctic Shipping Assessment and Emissions Inventory was also conducted for the North. Both inventories include emissions of criteria air contaminants (CACs), GHGs as well as a number of selected air toxins. The two studies also prepared baseline inventories for 2010 and forecasts for 2015, 2020 and 2025. The department was also a recipient of the North American Marine Environment Protection Association 2013 Government Agency Marine Environment Protection Award.
- British Columbia published the West Coast Spill Response Study focusing on spill prevention, preparedness, response and recovery. In response to the possible shipment of crude oil from the west coast, this study details the current state of spill prevention and response capability, future risks to the system, best practices and ways to mitigate those risks.
- The Port of Halifax will be the first port in Atlantic Canada to implement Shore Power for cruise ships, beginning with the 2014 cruise season. Shore Power, enabling on board systems to run on electricity rather than diesel power, thereby reducing emissions of air pollutants and greenhouse gases, was also launched at the Swartz Bay Ferry Terminal in British Columbia and is also available at Port Metro Vancouver and the Port of Prince Rupert.

Safety

- In 2013, there were 286 accidents involving Canadian registered vessels (236 shipping accidents and 50 accidents aboard ships). In addition to Canadian vessel accidents, there were 33 foreign-flag vessel accidents

in 2013. Commercial marine fatalities totalled 13 in 2013. There have been 187 marine fatalities reported in Canada over the last 10 years (2004–2013).

- TC amended the Atlantic Pilotage Authority Regulations in November 2013 to align them with the Marine Personnel Regulations and General Pilotage Regulations. These changes improved the ability of the Pilotage Authorities to recruit and train pilots, enhanced safety and ensured fees offset administration and other costs.
- Boating is by far the most frequent type of activity leading to water-related injury and fatality in Canada, accounting for more than 3,000 deaths in Canada from 1991 to 2008—the latest year for which data are available. Failure to wear a flotation device was a factor in up to 88 percent of injuries and fatalities. A victim's inability to swim and alcohol consumption while boating accounted for an even higher proportion of injuries and fatalities. Finally, a key environmental factor for recreational boating drowning deaths in Canada is cold water, which has been associated with a least 35 percent of fatalities from recreational boating in Canada over the aforementioned time period. In order to address this issue, TC has committed $1.8 million over three years to the Boating Safety Contribution Program to raise public awareness of boating safety issues, support regulatory compliance and help reduce boating accidents.
- In 2013, more than 115,000 pleasure craft licence transactions were processed by the Pleasure Craft Licensing Centre. Canada has approximately 9.4 million recreational boaters in any given year and recreational boating contributes an estimated $8.9 billion annually to the Canadian economy, according to the National Marine Manufacturers Association of Canada.
- During 2013, TC transitioned from issuing certificates for vessels of 24 metres in length and above to having them delivered by third party providers. This change was announced in November 2012 and was phased in in January 2014. This harmonizes Canada's certification model with international practices and will allow TC to focus on risk-based inspections.
- In 2013, the Canadian Coast Guard received a new Hovercraft, the *CCGS Moytel*, to be based at Sea Island in Richmond, B.C., four Hero-Class Mid-Shore Patrol Vessels and a new speciality vessel, the *CCGS S.Dudka*. These new vessels will help ensure the safety of fishermen, recreational boaters and sailors.

Security

- Port Metro Vancouver and the Government of Canada announced a $106-million investment in two new marine container examination facilities in Delta B.C. The federal contribution is $49.9 million. These improved facilities will process containers faster, improve security, decrease wait times and lower emissions.
- The updated Marine Security Compliance and Enforcement Program was implemented in February 2013 to promote compliance with the requirements of the *Marine Transportation Security Act* and its regulations. The program deals primarily with vessel and marine facility operators and port administrations and encourages pro-security behaviours, practices and innovations.

6. Rail Transportation

The year 2013 was marked by the tragic train derailment in Lac-Mégantic, Quebec, which killed 47 people. This accident has propelled the transportation of oil and other dangerous goods by rail to the forefront of the national consciousness and spurred action in a number of areas to ensure the safety of rail transportation. Meanwhile, Canada's railways continued to invest in improving their networks to better access global markets.

Economic Marketplace and Infrastructure

Railways

Freight Transportation

- In 2012, the last year for which financial data for all carriers are available, Canadian railways carried a total of 336.5 million tonnes of freight. This represents an increase of nearly 8.6 million tonnes from 2011 or 2.6 percent. In 2012, the railway industry in Canada employed 33,646 people.
- In 2012, Canadian rail freight carriers had operating revenues of $12.3 billion from Canadian operations. This represents an increase of 8.4 percent from 2011 revenues of $11.4 billion. Operating expenses increased 7.2 percent in 2012, reaching $9.7 billion. This provided an improvement in the operating ratio, from 79.4 percent in 2011 to 78.5 percent in 2012.
- System-wide, Canadian National (CN) earned $2.6 billion in 2013, which was comparable to 2012 despite revenues growing 6.7 percent to $10.6 billion. Its operating ratio was 63.4, compared to 62.9 a year earlier. Meanwhile Canadian Pacific Railway (CP) earned $875 million on system-wide revenues of $6.1 billion Earnings were up 81 percent compared to 2012 while revenues were up 7.7 percent. CP achieved an operating ratio of 69.9, an all-time record for the Calgary-based company.
- In terms of volume, the top three commodities shipped by rail were coal at 42.5 million tonnes, iron ore at 35.7 million tonnes and grains at 34.2 million tonnes. Shipments of oil and gas by rail tank cars grew by 14.3 percent in 2013 to reach 30.4 million tonnes. This increase is largely attributed to rapid increases in crude production in both Canada and the United States, stagnant current North American pipeline capacity and revenue opportunities in diversified markets.
- The number of crude oil rail carload movements has increased significantly over the last couple of years, from around 340 in 2010 to more than 53,000 in 2012. Despite the recent significant increase in the volume of crude oil being moved by rail, crude oil carloads accounted for approximately 1 percent of total carloads in 2012.
- According to the Canadian Association of Petroleum Producers, Canadian crude oil production is anticipated to increase by about 4.2 percent annually from 2012 to 2030 and both of Canada's Class I freight railways, CN and CP, anticipate higher demand for transporting crude oil by rail.
- In 2013, CN announced $1.9 billion for capital investment, including $1 billion to maintain and improve track infrastructure, $200 million for equipment and assets to enhance the overall quality of their fleet and $700 million to support other projects that enhance productivity and growth, such as information technology projects. In April 2013, CN announced an additional $100-million investment to undertake enhancements in its Edmonton-Winnipeg corridor.
- CP announced $1.1 billion for capital investment in 2013, including the replacement or renewal of depleted assets, network capacity expansions and productivity initiatives, and addressing capital regulated by governments, principally train control. On May 7, 2013, CP announced an additional $75 million to $100 million to undertake track upgrades on the North Main Line between Edmonton and Winnipeg and signalling upgrades between Moose Jaw and Chicago.
- Railways opened a number of new intermodal facilities across Canada, including CN's $100 million Calgary Logistics Park and CP's Regina Global Transportation Hub. CSX announced the development of an 89-acre, $100-million facility in Valleyfield's Perron Industrial and Harbour Front Park, which will link its network to

Montreal. In addition, 2013 saw the opening of new energy-related terminals, such as Di-Corp's 20-acre, 550,000-tonnes/year frac sand terminal in Grande Prairie and Torq Transloading's $100-million rail hub in Kerrobert, Saskatchewan. Torq also tripled the capacity of its Lloydminster facility.

- Fifty-three shortline and regional railways operated in Canada in 2012. They accounted for 22 percent of the total kilometres of track and $696 million in revenues. Collectively, these railways carried a total of 80.9 million tonnes of freight. This represents an increase of 0.5 million tonnes from 80.4 in 2011, or nearly 1 percent. In 2012, shortline railway revenues accounted for 5.6 percent of total revenues in the railway sector. In 2012, shortline railways employed 2,831 people.
- In the wake of the Lac-Mégantic tragedy, Montreal, Maine and Atlantic Railway Canada (MMA) filed for protection under the *Companies' Creditors Arrangement Act*. As of early 2014, its assets were in the process of being put up for sale.
- Kelowna Pacific Railway (KPR) entered into receivership in July 2013 and ceased operations. CN has restarted service on 156 km of track, previously leased to KPR from Campbell Creek to Lumby Junction in British Columbia. The main client on this line—Tolko Industries—is a lumber company. However, CN did not resume service on the remaining KPR network between Lumby Junction and Kelowna.
- The *Fair Rail Freight Service* Act became law upon receiving Royal Assent on June 26, 2013. The new provisions added to the *Canada Transportation Act* give companies that ship goods by rail the right to a service-level agreement with their railways and create an arbitration process through the Canadian Transportation Agency (CTA) to establish an agreement if commercial negotiations fail.

Intercity Passenger Rail

- In 2013, VIA Rail Canada, a Crown corporation, experienced a 0.2-percent decrease in passenger-kilometres compared to 2012 and a 2.4-percent decrease in revenues. Its on-time performance declined from 79 percent in 2012 to 78 percent in 2013. For 2012, the latest year for which data are available, it reported $26.4 million in net income, up $17.7 million from 2011. Revenues were up 4.8 percent to $277.6 million, while the federal government's operating funding subsidy was $279.1 million, up 7.0 percent from the previous year.
- The federal government provided VIA Rail Canada with $439.4 million in funding to support the Corporation's 2013–14 operations and capital requirements. Investments were directed towards a variety of projects, including bridge rehabilitations, signalling system enhancements, equipment rebuilds, track improvements, station repairs and information technology upgrades.
- In August 2013, VIA Rail Canada announced that it was ceasing all of its operations between Matapédia and Gaspé in Quebec until repairs were made to the railway infrastructure and signalling systems.
- In 2013, Rocky Mountaineer expanded its service offerings for tourist rail travellers with the introduction of a new cross-border route, the Coastal Passage—which operates between Seattle and Vancouver.
- The CTA's *Rail Code Compliance Report* assessed VIA Rail Canada's and found it had a high degree of compliance with certain provisions of the *Passenger Rail Car Accessibility and Terms and Conditions of Carriage by Rail of Persons with Disabilities Code of Practice and the Removing Communication Barriers for Travellers with Disabilities Code of Practice*. The assessment examined general accessibility features of passenger cars, coach cars with wheelchair tie-downs and telecommunication systems for reservations and information.

Urban Passenger Rail

- On July 11, 2013, construction began on the new Union-Pearson (UP) Express terminal at Toronto's Union Station, already the nation's busiest transportation hub. The new 1,700-m^2 station will be conveniently located in the Skywalk, west of the Union train shed and in close proximity to both the GoTransit terminal and Toronto Transit Commission's buses and subway. At the other end of the line, the airport station is more than 75 percent complete. When it opens, prior to the 2015 Pan American Games, the $456-million UP Express will connect Union Station and Pearson International Airport in 25 minutes using diesel-powered trains.
- On August 12, 2013, the first guideway column for Vancouver's new Evergreen SkyTrain line was installed in Coquitlam. The 11-km Light Rail Transit (LRT) line will connect Coquitlam, Port Moody and Burnaby to the existing SkyTrain network when it opens in 2016.

- On October 11, 2013, tunnel construction for Ottawa's Confederation Line electric LRT system began. The Confederation Line, once completed will stretch 12.5-km, between Tunney's Pasture and Blair Road, will have 13 stations and will include a 2.5 km tunnel through downtown Ottawa. The $2.1 billion project is being built as public-private partnership between the City of Ottawa and the Rideau Transit Group Partnership.
- Calgary Transit will purchase 60 new S200 C-Train cars from Siemens Industry. These cars will replace existing cars that are over 30 years old and have reached the end of their useful life. They will also permit C-Trains to run with four cars rather than three.
- On March 21, 2013, CN sold a segment of its Oakville subdivision in the Greater Toronto Area to Metrolinx for $52.5 million. CN has retained freight operating rights on the segment, while VIA Rail Canada continues to operate its passenger rail services between Toronto and Windsor as well as Toronto and Niagara Falls using the subdivision. With the acquisition, Metrolinx owns 68 percent of the railway network that is served by GO Transit's commuter rail operations.

Environment

- In 2011, the latest year for which data are available, the rail sector emitted 6.9 Mt of CO_2e, accounting for 4.1 percent of transportation-related GHG emissions and 1.0 percent of total Canadian GHG emissions. Freight operations accounted for 97 percent of rail GHG emissions. Rail GHG emissions in 2011 were 1.2 percent lower than in 1990, even though freight activity grew significantly, which can be attributed to efficiency improvements.
- In 2011, the rail sector accounted for 8.9 percent and 6.1 percent of transportation-related NO_x and $PM_{2.5}$ emissions respectively, but contributed to less than 1 percent of transportation-related emissions of other air pollutants such as VOC, SO_x and CO. Between 1990 and 2011, rail-related emissions of SO_x, CO and NO_x fell by 91.1 percent, 25.5 percent and 16.9 percent respectively. Rail-related emissions of $PM_{2.5}$ and VOC, while representing less than 1.0 percent of transportation-related emissions, increased by 41.7 percent and 24.3 percent respectively over the period.
- Canada and the U.S. have continued to work collaboratively on a Locomotive Emissions Initiative as part of the Joint Action Plan for the Canada-U.S. Regulatory Cooperation Council. Extensive engagement with rail industry stakeholders has focused on options for reducing GHG emissions from locomotives. In 2013, work was initiated to support the development of a Canada–U.S. voluntary action plan between industry and government to reduce GHG emissions from the Canada–U.S. rail sector.
- CN is testing two 3,000-horsepower locomotives that run on a mix of nine parts liquefied natural gas (LNG) to one part diesel on a stretch of track between Edmonton and Fort McMurray. The route to the oil sands was chosen partly because of the difficult, rolling terrain and the high-tonnage trains that locomotives typically pull on that route. The benefits of natural gas engines include reduced greenhouse gas emissions and operating efficiency. CP as well as major U.S. railways have also expressed interest in LNG-powered locomotives.
- On September 16, 2013, TC and the Railway Association of Canada (RAC) announced a renewed Memorandum of Understanding (MOU), which builds on the success of two previous MOUs. The renewed MOU encourages RAC members, including freight, intercity passenger, shortline and commuter railway companies in Canada, to continue to voluntarily reduce locomotive emissions. The agreement includes measures, targets and actions that will further reduce the intensity of GHG emissions from rail operations and includes a commitment to continue to monitor criteria air contaminants.
- The 2011 Locomotive Emissions Monitoring report, published in 2014, showed that railway fuel consumption in 2011 was 2 million litres, down 3 percent from the previous year. Class I railways consumed 86.5 percent of this fuel. About 14.8 percent of all fuel was consumed within the Quebec City–Windsor corridor.

Safety

Accidents

- In addition to the Lac-Mégantic derailment, there were 1,068 railway accidents in 2013, a 4-percent increase over 2012 and identical to the five-year average. These accidents caused 127 fatalities, 44 more than in 2012, mainly due to the accident at Lac-Mégantic. There were 188 grade-crossing collisions, identical to the average of the five previous years. There were 58 trespassing accidents, 21 percent below the average of the five previous years.
- On June 27, 2013, the Bonnybrook rail bridge outside a CP yard in Calgary collapsed, following severe flooding of the Bow River. A portion of the rail bridge dropped more than 60 cm in 90 minutes, stranding six freight cars, including five carrying petroleum diluents.
- On September 18, 2013, an OC Transpo double-decker bus and VIA Rail Canada's Train 51 collided at a grade-crossing outside the Fallowfield railway station in Ottawa, killing six bus occupants. Train 51 was travelling from Montreal to Toronto via Ottawa. A decade earlier, the city had studied building a $40-million underpass at that site to provide grade separation between road and rail traffic. The Transportation Safety Board is investigating this accident.
- TC accepted the findings of the Advisory Council on Rail Safety's Working Group on Locomotive Voice and Video Recorders (LVRs), which called for the voluntary installation of voice/video recording devices on locomotives by railway companies. The Minister of Transport also wrote to the Railway Association of Canada and individual railway companies to strongly encourage installation of recording devices.

Legislation and Oversight

- The amendments to the *Railway Safety Act* came into force on May 1, 2013. The amended *Railway Safety Act* will encourage rail companies to create and maintain a culture of safety and penalize rule-breakers by enabling the Government of Canada to:
  - Require railway companies to obtain a safety-based Railway Operating Certificate and to submit environmental management plans
  - Crack down on rule-breakers with tough new monetary penalties and increased judicial penalties
  - Create whistleblower protection for employees who raise safety concerns
  - Require each railway to have an executive legally responsible for safety
  - Emphasize the central importance of safety management systems
  - A key component of these amendments is that local railway companies now fall directly under the authority of the *Railway Safety Act* when operating on federally regulated railway lines. This means that local railway companies will be directly responsible for complying with the federal railway safety regime when on federally regulated track. They will submit to TC for approval a set of operating safety rules and gudelines that they will require their employees to follow. TC will be responsible for monitoring their compliance with these rules by working directly with the local company instead of their host railway company.
- The Federal Office of the Auditor General (OAG) completed a performance audit of TC's oversight of rail safety in 2013. The report identified several issues that require attention, including delays in regulatory development, better integration of Safety Management Systems, training of inspectors and quality assurance. TC developed an action plan to respond to the OAG's recommendations and will be implementing them over the next several years to address the recommendations.

Security

- A number of freight and passenger services were impacted by railway blockades from various interest groups (e.g., Idle No More). In January 2013 the Idle no More Protest Movement, originating among First Nations in Canada in December 2012, continued into the New Year with protests taking place at various locations across the country. Locations included not only provincial highways but also international bridges, freight rail lines as well as passenger lines, which included the rail corridor between Toronto and Montreal/Ottawa.
- On April 22, 2013, two men were arrested in relation to a planned terrorist attack against a VIA Rail Canada passenger train. There was no imminent threat to the general public, rail employees, train passengers or infrastructure. These arrests, however, have highlighted the importance of continued vigilance within the transportation system.
- As part of the *Beyond the Border Action Plan*, a series of pilot projects were enacted to validate and shape the implementation of the Integrated Cargo Security Strategy. The strategy aims to address risks at the earliest opportunity by taking actions to reduce risk in the transportation and supply chain and move it away from the Canada–U.S. border in order to facilitate the legitimate flow of international shipments across the border. The pilot projects included perimeter vetting and examination of inbound marine cargo at Prince Rupert destined for Chicago by rail and marine cargo at Montreal destined for the U.S. by truck.

New road and bridge projects dominated transportation infrastructure investments in Canada in 2013. Meanwhile new regulations will reduce the smog-creating pollutants produced by cars and trucks, while new tire regulations and better crash test practices should improve road safety for all Canadians.

Economic Marketplace and Infrastructure

Road Usage

- In 2011, the latest year for which data are available, the National Highway System (NHS) carried nearly 130 billion vehicle-kilometres of travel, a decrease of about 1 percent from 2010 and over 18 billion vehicle-kilometres of truck travel, a decrease of about 3.5 percent from 2010. The NHS accounts for nearly 40 percent of travel on all roads in Canada.
- In 2013, Transport Canada (TC) added heavy trucks (gross vehicle weight of 4.5 tonnes or higher) to the Canadian Vehicle Use Study (CVUS), a large-scale sample survey of motor vehicle activity. The study has been collecting travel and fuel consumption information on cars and light trucks in the provinces of Ontario, Quebec, Manitoba and Saskatchewan since 2011, using portable electronic data loggers. After modification and testing of the light vehicle logger to support heavy truck operations, a full-scale, all-electronic heavy truck survey was launched on July 1, 2013. For 2013, the CVUS showed that the average light vehicle drove 16,443 km during 385 hours and consumed 1,816 l of fuel. More results can be found at the CVUS website: **www.tc.gc.ca/cvus.**

Cross-Border Activity

- In 2013, the value of Canada–U.S. two-way trade increased more than 5 percent over 2012 to a total of $605 billion. Close to 55 percent of this trade was shipped by trucks ($335 billion) and nearly 78 percent of Canada–U.S. total road-based trade passed through Ontario and Quebec border crossings with the United States.
- In 2013, car and truck traffic crossing the Canada–U.S. border grew modestly from 2012, reaching 64.4 and 10.7 million vehicles respectively. Car traffic increased by 1 percent over 2012, while truck traffic decreased by 0.3 percent. Traffic volumes as a whole were 1 percent higher than 2012 levels.
- In 2013, the level of truck activity at the Ambassador Bridge between Windsor and Detroit decreased 2.4 percent over 2012. Twelve of the 20 largest border crossings recorded higher truck traffic from the previous year.
- The value of trade across the Canada–U.S. border at crossings on the NHS reached $303 billion in 2012, up 4.5 percent from 2011. The value of tourism across the Canada–U.S. border at crossings on the NHS rebounded to $12.7 billion in 2012, up 6.7 percent from 2011.

Infrastructure

- The Detroit River International Crossing project will consist of a new six-lane bridge and will be delivered by a public-private partnership (PPP). It will provide the first freeway-to-freeway connection at Windsor–Detroit and a much-needed alternative to move people and goods efficiently across this border crossing. In 2013 the project received a U.S. presidential permit, which is required to build across the Canada–U.S. border. Advanced planning, property acquisition and utility relocation is ongoing in Canada and should begin in the U.S. in 2014.
- On August 15, 2013, the Ambassador Bridge—the busiest border crossing in Canada—raised its toll for passenger vehicles from $4.75 to $5.00, following a rise from $4.00 in 2012.
- On December 1, 2013, the Government of Canada announced a new accelerated timeline for the construction of the $3- to $5-billion new bridge for the St. Lawrence, which should now be in service in 2018, three years earlier than originally planned. The accelerated timeline responds to the recommendations of the Buckland & Taylor report completed as part of the Champlain Bridge surveillance and maintenance program.

The business case for the bridge, completed in December 2013, determined that it is more cost effective to use a public-private partnership model to build the bridge.

- As part of the New Bridge for the St. Lawrence project, the Government of Canada launched, in October 2013, the construction of the Nuns' Island temporary causeway-bridge. The temporary causeway-bridge is expected to be completed by 2015. This bypass bridge will be in place until the Nuns' Island Bridge has been permanently replaced.
- On November 30, 2013, a 75-tonne girder support beam was installed on the Champlain Bridge by Jacques Cartier and Champlain Bridges Incorporated after a crack was detected on a concrete edge girder in early November. The support beam was installed above the existing girder across its entire length and supported at the piers of the bridge. Steel rods anchored to the support beam were placed below the cracked girder to fully support it. The operation cost $2M and created significant congestion in the Montreal area.
- Construction of Highway (Hwy) 407 East is one of the largest highway construction projects ever to take place in Ontario. With the $1-billion Phase I (22-km stretch) already under way, on March 26, 2013, Ontario issued a request for qualifications to pre-qualify and shortlist project teams to deliver Phase II of Highway 407 East to be built between 2015 and 2020 and extending Hwy 407 further east to meet with Highway 35/115. An interim opening from Harmony Road to Taunton Road at the East Durham Link is scheduled for late 2017.
- The $3.3 billion, 10-lane Port Mann Bridge on Highway 1 in Metro Vancouver is the world's widest long-span bridge and the second longest cable-stayed bridge in North America. Eight lanes were opened to traffic in December 2012, with plans for opening the remaining two lanes by December 2013. However, completion of the Port Mann Bridge's final two lanes has been delayed to 2014. The bridge is electronically tolled.
- British Columbia's newest highway, the South Fraser Perimeter Road (SFPR), was completed in December 2013. The new four-lane highway facilitates commuter trips as it connects to all five major Fraser River crossings and offers more travel options. The highway provides an efficient and convenient transportation corridor, with connections to major trade gateways for commercial traffic. It also segregates commercial traffic from residential areas, improving community safety and quality of life for families. The federal government contributed $365 million of the SFPR's $1.26-billion cost.

National Highway System (NHS)

- In 2012, the NHS pavement in "good" condition accounted for 25,917 km (68 percent of the total NHS), an increase of about 2.5 percent over 2011. This is the result of ongoing investments by all levels of governments.
- The number of bridges on the NHS that are less than 10 years old increased to 1,438 in 2012. This is an increase of over 6.4 percent from 2011. Once again, this can be attributed to the construction of new bridges and ongoing reconstruction and major rehabilitation of existing bridges by all levels of governments on the NHS.

Trucking

- In 2012, Canadian for-hire carriers moved 240 billion tonne-kilometres of freight, up 7 percent from 2011. Roughly 142 billion tonne-kilometres (59 percent) were attributed to the domestic sector and 98 billion tonne-kilometres (41 percent) in the international sector.
- The average price of road-diesel fuel for commercial users in 2013 increased by 2.5 percent over 2012.
- There were 129 trucking bankruptcies in 2013, a 10-year low, representing a 17 percent decrease from 2012.
- Discussions are ongoing regarding long combination vehicle (LCV) operations and driver certification harmonization between Ontario, Quebec, Nova Scotia and New Brunswick.
- TransForce Inc. entered into an agreement to acquire Vitran Corp., another trucking company, for $136 million in December 2013. TransForce also acquired Clarke Transport Inc., Clarke Road Transport and Velocity Express. In 2012, TransForce earned $154 million on revenues of $3.1 billion.

Intercity Bus

- In the intercity bus sector, Canada–U.S. bus travel accounted for 1.9 million passengers in 2013, down 1 percent from 2012.

- In 2012, bus industry revenues (including government contributions) were estimated at $15.8 billion, an increase of 2 percent over 2011. The urban transit sector accounted for 78 percent of total bus industry revenues, including government contributions.
- Following its decision to divest itself of the Ontario Northland Transportation Commission (ONTC) in December 2013, the Ontario government updated its mandate for public transportation and telecommunications networks. The updated mandate will allow ONTC to formally explore other options such as restructuring, alternate services delivery and/or support from government without ruling out divestiture.

Public Transit

- St John's Metrobus inaugurated its new $34.2-million headquarters and bus garage in December 2013. The project was funded by the city and the federal government. The 10,800-m^2 building, expected to become LEED certified, incorporates a number of environmentally friendly features, such as a cistern that collects rain water to wash the bus fleet.
- In September 2013, Sherbrooke's STS, Société de transport de Sherbrooke (STS) transit corporation launched its STS.direct app that enables smart phone and tablet users to plan their journey, see bus schedules and receive notices of any interruption of service.
- In 2013, Montreal's transit corporation, Société de transport de Montréal (STM), started testing a bio-diesel-electric hybrid bus lent to it by Nova Bus, a division of Volvo Group Canada Inc., with service trials ending in October. The objective was to assess the energy efficiency and reliability of this type of bus prior to receiving 203 of these vehicles in 2014. The STM's order, placed in 2012, was combined with orders for 306 bio-diesel-electric hybrid buses by other Quebec-based transit corporations.
- OC Transpo introduced its new $34 million Presto smart card system in Ottawa. Similar to other chip cards in use in Montreal and Toronto, Presto is a rechargeable card that enables public transit clients to simply tap their card upon boarding a bus to validate their fare. It also lets clients conveniently recharge their cards over the Internet. OC Transpo's 2013 budget allocated $550,000 for converting five hybrid buses to diesel propulsion engines to save fuel costs, and $225,000 to investigate new fuel technologies and idling. OC Transpo indicated it will not electrify its bus fleet since it is unproven technology in Ottawa's climate.
- In 2013, The Toronto Transit Commission (TTC) introduced the first of 153 new clean, diesel low floor articulated buses at a total purchasing cost of $143.7 million. The new buses should provide more reliable service as they are designed for up to 77 passengers, an increase of 45 percent from the standard 40-foot buses, and reduce the TTC's operating costs as fewer bus operators will be required. The accessible articulated bus will be used on high-demand routes by the TTC since they facilitate faster customer boarding inside Toronto's subways stations and de-boarding at bus stops because they have three doors, not just two.
- The first phase of the "Smart Bus" project was initiated by Edmonton Transit in 2013. This project involved the use of a computer-aided dispatch (CAD) system called Transit Master on Edmonton's Transit System (ETS) inspector vehicles. This technology provides ETS personnel with real-time information about incidents that may occur on Edmonton city buses during regular operations. Some benefits of Smart Bus include: quick access to relevant information for a quick response; a consistent reporting process; and a map view of vehicles and resources.
- Vancouver's TransLink leveraged $125 million in federal gas tax funding to purchase 45 compressed natural gas (CNG) buses to replace older diesel buses and install CNG infrastructure for buses in Surrey and Richmond.

Environment

- In 2011, the latest year for which data are available, the road transportation sector emitted 137.5 Mt of CO_2e, accounting for 81.1 percent of domestic transportation-related GHG emissions and 19.6 percent of total Canadian GHG emissions. Between 1990 and 2011, road transportation GHG emissions grew from 97.1 Mt to 137.5 Mt, representing an increase of 41.7 percent, for an average annual increase of 1.7 percent. This increase can be attributed to an increase in passenger vehicle activity, driven by population growth, a shift towards the use of less efficient light trucks and sport utility vehicles as well as the growing share of freight that is being moved by trucks. The introduction of the *Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations* and the *Heavy-duty Vehicle and Engine Greenhouse Gas Emission Regulations* should help ensure on-road GHG emissions remain stable from 2011 to 2020.

- In 2011, road transportation accounted for 41.1 percent of transportation-related CO emissions, 17.8 percent of NO_x emissions and 10.9 percent of VOC emissions. Passenger vehicle activity, which is mostly reliant on motor gasoline, accounted for the majority of road transportation GHG emissions (65.6 percent) and CO, VOC and SO_x emissions (97.0 percent, 92.8 percent and 68.6 percent of road emissions respectively). Freight activity, which is mostly dependent on diesel fuel, contributed to the majority of $PM_{2.5}$ and NO_x emissions (73.6 percent and 53.0 percent of road emissions respectively). Between 1990 and 2011, road-related VOC, CO and NO_x emissions fell by 71.8 percent, 63.6 percent and 60.1 percent respectively. While they now represent no more than 2.0 percent of total transportation emissions, road-related emissions of SO_x and $PM_{2.5}$ decreased by 93.8 percent and 78.0 percent respectively over the same period.
- The *Heavy-duty Vehicle and Engine Greenhouse Gas Emission Regulations* were published in the Canada Gazette Part 2 in March 2013. The regulations apply to new vehicles starting with the 2014 model year and align with the regulations developed in the United States.
- On June 8, 2013, Environment Canada published a Notice of Intent (NOI) to develop regulations to further limit emissions of smog-forming air pollutants from new cars and light trucks and to reduce the sulphur content of gasoline, in alignment with U.S. "Tier 3" standards.
- In December 2013, TC amended its *Motor Vehicle Safety Regulations* to allow for greater variety of "boat tail" (aerodynamic devices) designs to be used by trucking companies.
- The STM unveiled its second Sustainable Development Plan with a timeline that goes to 2020. The plan is built around four pillars: increased services, better accessibility, a smaller environmental footprint and sustainable procurement.
- Quebec City's transit corporation, RTC, opened the first bus garage certified LEED silver in Canada, built with locally sourced and recycled materials. It is designed to reduce energy use by a quarter.

Safety

- Manufacturers issued 466 recalls in 2013, affecting a total of 3,125,726 vehicles, tires and child car seats. Although the number of recalls is consistent with the previous five-year average, the total number of vehicles affected by these recalls increased significantly and was 54 percent higher than for the previous five-year average of 2.01 million. Of note, of the 466 recalls issued in 2013, 37 (or 7.9 percent) were influenced by TC's interactions with manufacturers and these 37 recalls affected 36.5 percent (1,142,344) of the total recall population.
- In November 2013, the *Motor Vehicle Tire Safety Regulations* (MVTSR) were announced. These more stringent tire safety standards replaced the previous tire regulations, which dated back to 1995. The new tire regulations aligned tire safety regulations with the United States, with the added goal of creating efficiencies and reducing costs for manufacturers and consumers alike. The regulations will also allow the enforcement of winter tire standards if manufacturers choose to use the peaked mountain with a snowflake symbol. When Canadian-market manufacturers choose to apply this symbol, this indicates to consumers that the tire meets Canadian winter tire regulatory standards.
- In February 2013, the Minister of Transport announced that frontal impact crash protection standards had been strengthened by increasing the vehicle crash test speed, requiring the use of female and child-sized dummies, in addition to the male testing dummies that were previously required, and making lap and shoulder belts mandatory in the centre position of rear seats. These new requirements will improve vehicle safety and align Canadian safety standards more closely with those of the United States, thus facilitating cross-border trade in new vehicles and encouraging long-term economic growth. These regulatory changes are among the commitments of the Canada–United States Regulatory Cooperation Council announced by Prime Minister Harper and President Obama in February 2011.
- With funding support from federal, provincial and territorial transportation agencies, the Council of Deputy Ministers Responsible for Transportation and Highway Safety began the Canadian Naturalistic Driving Study (CNDS), which will analyze driver behaviour in normal day-to-day vehicle operations. The data collected via these highly instrumented vehicles will include detailed data on driving behaviour and the interaction of driver, vehicle, roadway and environment over an extended period of time. In addition, work has begun on adding commercial motor vehicles to the project.

- In August 2013, as required under the *Motor Vehicle Transport Act*, the Minister tabled in the House of Commons and the Senate the *Annual Report to Parliament on Commercial Vehicle Safety in Canada* for the year 2009. The report addressed the progress of implementation of the rules and standards respecting the safe operation of extra-provincial trucking and bussing companies. The results indicate that the provinces and territories continued to make progress to implement the requirements of the National Safety Code, with overall casualties continuing their downward trend by 12.9 percent compared to 2008, while fatalities declined by 12.8 percent.
- The Canadian Council of Motor Transport Administrators has developed and released a number of reports to assist jurisdictions in the enhancement of road safety including: Countermeasures to Improve Pedestrian Safety in Canada, Survey of Use of Electronic Communication Devices by Canadian Drivers in Urban Areas, 15-Passenger Van Safety and a Roadside Survey Protocol for Determining the Prevalence of Alcohol and Drug Use by Drivers. These reports can be found at **www.ccmta.ca**.

Security

- TC, in consultation with industry stakeholders, pursues voluntary Memoranda of Understanding (MOU) with international bridge and tunnel owners and operators, with the aim of establishing a consistent approach to security at these facilities. All key vehicular international bridges and tunnels have now signed the MOU, including crossings that carry 93 percent of truck traffic across international bridges and tunnels between Canada and the U.S.
- Various international bridge and tunnel owners/operators as well as many railways conducted security exercises in 2013.
- In 2012, the latest year for which data are available, TransLink reported that that there were 116 assaults on bus drivers, 30 fewer than in the previous year and 52 percent below the peak set in 2006. Since 2006, TransLink and the Coastal Mountain Bus Company, which operates Translink's buses, have taken proactive steps to improve security for transit operators, such as enabling emergency communication between the bus operator and the Transit Communication Centre, tracking buses with global positioning systems, installing video cameras on buses and setting up a workplace committee to examine operator safety.

8. Transportation of Dangerous Goods

There were 400 dangerous goods accidents in 2013 resulting in 57 fatalities.

- In 2013, it is estimated that over $27 billion in chemical products were produced and shipped in Canada. The country's shifting trade patterns towards Asia as well as increased resource development in Northern Canada are expected to alter both the nature and the volume of dangerous goods that are transported in Canada.
- Dangerous goods are shipped to or received at more than 40,000 business sites across Canada. For 2011, TC estimates that 70 percent of dangerous goods (by weight) were transported by road, 24 percent by rail and 6 percent by marine. Less than 1 percent is transported by air.
- The most common dangerous goods by volume transported in Canada are crude petroleum oil, gasoline and fuel oils, representing 77 percent of all dangerous goods transported by road.
- In 2013, there were 400 accidents involving dangerous goods (incidents where regulations required a report to TC). This is a 3-percent increase over 2012, when there were 389 incidents, and a 13-percent increase over the five-year (2009–2013) average.
- In 2013, there were 48 injuries and 57 fatalities associated with reported dangerous goods accidents. Of those, 23 injuries and 50 deaths were attributed to the dangerous goods themselves, while the remainder were attributed to the actual accident. From 2009 to 2013, there were an average of 12 injuries per year attributed to dangerous goods. The Lac-Mégantic rail accident accounted for 47 of the deaths attributed to dangerous goods, while all other accidents combined for three deaths.
- Although there has been an increase in the number of transport accidents across the road, rail and air modes, accidents still occur more than twice as often during loading or unloading at transportation facilities as compared with actual transport, with road accidents representing 88 percent of in-transit dangerous goods accidents. The remainder occurred during transit by rail (8 percent) and air (4 percent).
- Almost 91 percent of dangerous goods accidents involved either Class 3, Flammable Liquids (65 percent), Class 8, Corrosives (14 percent) or Class 2, Gases (12 percent).
- The top two categories of underlying factors contributing to accidents were human error (56 percent) and equipment (34 percent), which includes gauges, valves, vents, closures, hoses and more. This remains very consistent with the previous year's figures.
- TC's Canadian Transportation Emergency Centre, CANUTEC, provides immediate technical emergency response advice and assistance, 24 hours a day, seven days a week, to first responders (firefighters, police, ambulance) and the Canadian public in handling dangerous goods in the event of an incident.
  In 2013 CANUTEC provided assistance in 940 emergency situations and handled 21,983 telephone calls.
- In 2013 CANUTEC became signatory to the Memorandum of Cooperative Understandings (MOU) between the Emergency Centers of the Americas. This MOU facilitates the sharing of dangerous goods information and cooperation in the event of a chemical spill, leak, fire or exposure, where information between countries is needed quickly to protect personnel, property and the environment. Other signatories to this MOU include the United States, Mexico, Argentina, Colombia, Brazil and Chile.

Canada's gateways continued to facilitate reliable and efficient transportation options to support the national trade agenda and access to emerging markets. Efforts are under way to examine system capacity and fluidity in order to understand the long-term requirements of the national transportation system, including the development of infrastructure in northern Canada to support resource development and further diversify Canada's international trade.

Asia-Pacific Gateway and Corridor

- New projects were selected under the Asia-Pacific Gateway and Corridor Transportation Infrastructure Fund from $50 million in reallocated funds. Critical to the Canada–United States *Beyond the Border Action Plan*, Port Metro Vancouver (PMV) and the federal government will invest $56 million and $49.9 million respectively to build two new marine container customs examination facilities in Delta and Burrard Inlet to accommodate anticipated cargo growth. The ports of Prince Rupert and PMV are currently ranked in the top five for productivity in the Americas (third and fifth respectively).
- Transport Canada (TC) measures the fluidity and performance of supply chains to follow through on its commitment to support the Asia-Pacific Economic Cooperation's (APEC) goal of increasing supply-chain efficiency by 10 percent by 2015. In 2013, the average end-to-end transit time for container imports from Shanghai to Toronto via the Asia-Pacific Gateway increased by 2.9 percent to 24.3 days. The increase was due to unfavourable weather conditions and was partly offset by the relative stability of ocean transit. The increase in average end-to-end transit time was also due to early- and late-year operational setbacks at west coast ports and inland transit.
- In 2013, TC developed a tool a on pilot basis to assess the feasibility of estimating the carbon footprint of Canadian gateways. The scope of this initial phase covers the Asia-Pacific Gateway, including the contribution of marine, port, rail and truck greenhouse gas emissions (GHG). More specifically, the tool estimates the GHG emission intensity—measured in kilograms of GHG emissions per twenty-foot equivalent units (TEUs)—of the main elements of the Asia-Pacific Gateway for inbound container movements from Shanghai and Hong Kong to key North American markets. Work is under way to improve data in collaboration with stakeholders and to expand the tool to cover the container traffic flowing through eastern Canadian ports.
- A report on technology and skills in transportation prepared by Westac for the Asia-Pacific Gateway Skills Table indicated that industry stakeholders interviewed for the study prioritize capital infrastructure over human capital investments. Respondents favoured investments in environmental technologies, followed closely by investments in business process automation. Work tools that support worker mobility, such as apps and smart phones, were human capital investment priorities, while investing in e-learning technologies was not.

Ontario–Quebec Continental Gateway and Corridor

- Marine containers entering the Port of Montreal faced reliability challenges in 2013, especially in the latter part of the year, due to severe winter conditions. As a result, the reliability of inland transit times decreased slightly compared to 2012.
- During its first year of operation, in 2013, CargoM, Montreal's logistics cluster, carried out several actions and projects, such as launching a website (**www.cargo-montreal.ca**), establishing three work tracks (opportunities and sectoral development, communication and outreach and trucking access and fluidity) and completing a study on the profile of the logistics industry in Greater Montreal. In parallel, several projects were carried out including the creation of industry committees to diagnose supply chain issues, the OttoView project measuring truck movements and "Did you know" guides in order to facilitate access to various port terminals.

Atlantic Gateway

- In 2013, the Halterm container terminal invested $20 million in two post-panamax cranes at the Port of Halifax. In addition, the Atlantic Gateway was promoted at major international events in the United States, Europe and Brazil.

- On October 17, 2013, the Halifax and Shenzhen port authorities signed a sister port agreement to develop two-way trade and to grow the shipping business for both ports as well as deepen understanding and build relations between the two regions. The port of Shenzhen ranks fourth in the world and second in China in terms of containers handled.

The North

- The Baffinland Mary River iron ore mine was approved in December 2012 but was scaled back the following month in the wake of a decline in commodity prices. The project will now be phased in, pending approval by the Nunavut Impact Review Board (NIRB), expected in 2014. Meanwhile, the first phase of development of Baffinland resulted in the building of an airstrip, road and port. The long-term plans include a second airstrip, a second port and a rail line. Once the mine is fully operational, it is expected produce and ship more than 18 million tonnes of ore per year.
- The Inuvialuit Environmental Impact Screening Committee (EISC) has received a project description from Imperial Oil for the proposed Beaufort Sea Exploration Drilling Program. If approved, the site, which is located 175 km north of Tuktoyaktuk, would represent the farthest offshore and deepest site ever drilled in the Beaufort Sea. The earliest that drilling could start would be 2019 or 2020 and would require marine transportation services to carry oil, equipment and personnel to and from the site.

Multimodal

- TC and its Indian counterparts created the joint Canada–India Transportation Working Group in 2013 to support the Canada-India Memorandum of Understanding on Road Transportation and the whole-of-government Canada-India Joint Science and Technology Cooperation Committee (JSTCC) initiative.
- The *Beyond the Border Action Plan* made considerable progress in several areas, including: release of the first annual bi-national Border Infrastructure Investment Plan (the second annual plan (BIIP 2.0) is currently in approvals); announcement of significant investments at four Canadian priority border crossings (up to $60 million for Lansdowne, Ontario, $47 million for Lacolle, Quebec, and $10 million each for North Portal, Sasketchewan and Emerson, Manitoba); increased harmonization of benefits for trusted travellers under the NEXUS trusted traveller program; mutual recognition of Canadian and U.S. air cargo security screenings; improved marine resiliency in the event of an emergency; near completion of live phase of pilot projects to validate and shape implementation of the Integrated Cargo Security Strategy and subsequent commencement of evaluation phase; Government of Canada funding approval for the deployment of border wait-time measurement technology at 14 of 20 high-priority crossings (of note, border wait-time measurement technology was deployed at six bi-national crossings, four in British Columbia and two in Ontario, through other funding programs); completion of Phase I of the truck cargo pre-inspection pilot project at the Pacific Highway crossing and the successful launch of Phase 2 at the Peace Bridge; and the conclusion of substantive negotiations on a land, rail and marine (LRM) preclearance agreement.
- In February 2013, the House of Commons Standing Committee on Transportation, Infrastructure and Communities (SCOTIC) released its report on Innovative Transportation Technologies. The committee examined innovation in the transportation sector and the role of the federal government, focusing on new transportation technologies that are commercially viable, barriers to commercialization and adoption of new transportation technologies and the government's role in enabling advances in transportation research and development. The Report focused on innovation in the on-road vehicle, rail, aerospace and alternative fuel industries. SCOTIC issued 23 cost-neutral recommendations based on what the Committee heard from over 40 industry and government stakeholders to streamline regulation and expand competition, so that private-sector transportation innovation can better move people and products.

The following tables can be found in the 2013 Statistical Addendum, available at
http://www.tc.gc.ca/eng/policy/anre-menu.htm

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